

## ABSTRACT

The present invention provides a miniature MEMS microphone comprising a single-ended transducer element connected to an amplifier providing a differential electrical output at terminals arranged at a substantially plane exterior surface. The differential or balanced

5 output signal provides a miniature microphone exhibiting a high dynamic range and a reduced susceptibility to EMI. The microphone is adapted for surface mounting thus the extra output terminal required is still suitable for low cost mass production. In preferred embodiments the transducer element and amplifier are silicon-based. The microphone may have a plurality of separate single-ended transducer elements connected to separate

10 amplifiers providing separate differential outputs. The microphones according to the invention are advantageous for applications within for example hearing aids and mobile equipment.